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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/736,351

12/15/2000

Wendel Dean Renner

8932

7590

01/16/2003

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EXAMINER

BARBER, THERESE

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/736,351

Applicant(s)

RENNER, WENDEL DEAN

Examiner

Therese Barber

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Olivera et al. (USPN 6,438,202 B1).

3. Regarding claim 7, Olivera discloses the process of utilizing a radiotherapy machine to verify the radiation dose to a patient from a plurality of the radiation beam comprised of measuring the output of the intended treatment beam over the area of the radiation beam in a plane perpendicular to the central ray of the radiation beam prior to impingement upon the patient (col. 7, lines 5-37); using the measured output of the radiation beam to calculate the dose to the patient from the treatment beam using a dose algorithm (col. 7, line 66 to col. 8, line 33);

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accumulating the dose to the patient from all of the radiation treatment beams to produce a dose distribution (col. 9, lines 44-65); and using the dose distribution to compare the intended dose to verify the correctness of the treatment plan (col. 9, line 66 to col. 10, line 17).

4. Regarding claims 8 and 9, Olivera discloses that verification process can be implemented without the patient being present (col. 8, lines 41-46; col. 9, lines 23-43) and that the verification process can be performed while treating the patient (col. 8, lines 20-39 and 46-48).

#### ***Response to Amendment***

5. The Swerdloff reference has been withdrawn as the primary reference based on the amendment dated 30 October 2002.

6. The applicant has cancelled claim 6 and submitted amended claims 7-8. However, claims 7-9 have been rejected based on the Olivera reference as stated above.

7. It is noted in a letter dated 6 May 2001 from the applicant that the applicant stated the utilization of approximately 150,000 lines of C++ code to implement the claimed process of verifying the radiation dosage to a patient. In addition, it is noted that in amended claim 7, step (b) that one of the claim limitation is a dose algorithm being utilized to calculate the dose to the patient from the measured output of each radiation beam.

The examiner suggests that the applicant amend the specification to include details of the algorithms utilized to calculate the dose to the patient from the measured output of each radiation beam. Based upon these amendments to the specification, it is suggested that the dose algorithm(s) are utilized in the claim limitation of claim 7, step (b).

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For example, Carol et al. (USPN 6,038,283) discloses a method and an apparatus for radiation therapy wherein the optimized radiation beam arrangement is determined by utilizing familiar partial volume data associated with the Cumulative Dose Volume Histogram. In this patent, the formulas for determining zone and total costs of each radiation treatment beam have been provided in the specification and also in the claimed language.


### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Therese Barber whose telephone number is (703) 306-0205. The examiner can normally be reached on Monday to Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4857 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

tb *tb*  
January 9, 2003

  
ROBERT H. KIM  
SUPERVISOR, PATENT EXAMINER  
1001 C STREET